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June 16, 2000

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FEDERAL COMMUNICATIONS COMMISSION
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BY HAND

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Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
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Washington, D.C. 20554

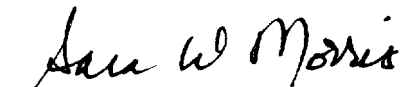
Re: **Reply Comments of Thomson Consumer Electronics, Inc.**
(MM Docket No. 00-39)

Dear Ms. Salas:

Enclosed for filing please find the original and nine (9) copies of the Reply Comments of Thomson Consumer Electronics, Inc. in the above-referenced docket.

Please stamp and return to this office with the courier the enclosed extra copy of this filing designated for that purpose. Please direct any questions that you may have to the undersigned.

Respectfully submitted,



Sara W. Morris
Telecommunications Consultant

Enclosures

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Before the
Federal Communications Commission
Washington, D.C. 20554

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JUN 16 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Review of the Commission's)
Rules and Policies)
Affecting the Conversion)
To Digital Television)

MM Docket No. 00-39

**REPLY COMMENTS OF
THOMSON CONSUMER ELECTRONICS, INC.**

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June 16, 2000

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Executive Summary

In these reply comments, Thomson reiterates and expands upon its views concerning two topics of critical importance to the transition: first, broadcasters' wrongheaded view that government should involve itself in the design of DTV receivers; and second, the substantial delay, and consequent harm to the transition, that would occur were the Commission to change the DTV standard.

Broadcasters' reliance on the All Channel Receiver Act as granting the Commission sufficient authority either to adopt minimum performance standards, or to require DTV reception capability in all television receivers 13-inches or larger, rests on an overly broad interpretation of the Act, which is belied by its legislative history and the Commission's own prior interpretation. In fact, Congress has affirmatively and knowingly rejected granting the Commission broad authority to set minimum performance standards. Similarly, the Commission has twice declined to mandate the manufacture of so-called "dual-mode" television receivers, citing the lack of any such mandate under the ACRA.

The National Association of Broadcasters' suggestion that the Commission adopt a "dual-mode" mandate for *all* televisions ignores the dramatic and harmful cost implications such a requirement would have for consumers of all analog television receivers. The proposal turns the entire idea of a transition to DTV on its head, effectively suggesting that the Commission force consumers, instantly, to make the transition to DTV – regardless of cost, needs and interest – before sufficient time has passed to drive down DTV costs, and sufficient DTV broadcast programming exists to ignite widespread consumer interest. Moreover, given its cost implications and its extraordinarily invasive nature – both to consumers and consumer electronics manufacturers – such a mandate could not be legally sustained without specific statutory authority granted by Congress.

Sinclair Broadcasting's claim that an alternative, COFDM-based, DTV standard could take "little more than a year" to implement is utterly vaporous and in conflict with the Commission's own findings. In fact, a thorough, factual analysis yields a much more realistic estimate. Using the ACATS process as a model, the effort to develop (with the necessary industry consensus), test and adopt a COFDM-based standard, and make necessary conforming changes to the DTV Table of Allotments, would – even optimistically – delay the transition by at least four years. Under that more accurate timetable, it is reasonable to project that DTV manufacturers might be able to introduce DTV receivers based on a new COFDM-based standard sometime in late 2006 or early 2007, and Congress's 85 percent DTV penetration threshold would be attained no earlier than 2012. At this critical stage in the transition, to proceed any further along a path toward revising the DTV standard without fully understanding the ramifications of that decision on the timing – and ultimate success – of the transition would be folly.

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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Review of the Commission's)	MM Docket No. 00-39
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**REPLY COMMENTS OF
THOMSON CONSUMER ELECTRONICS, INC.**

I. INTRODUCTION

Thomson respectfully submits these Reply Comments in the above-referenced proceeding concerning the Commission's rules and policies affecting the transition to digital television ("DTV").¹ Thomson wishes to reiterate its views on two areas of critical importance to consumer electronics manufacturers and to the success of the DTV transition.

First, the Commission lacks statutory authority to insert itself into the design of DTV receivers, either through the imposition of minimum performance requirements or a requirement that all television receivers be capable of decoding both ATSC and NTSC signals. Broadcasters' claims that the All Channel Receiver Act provides such authority rest on an overly broad interpretation of the Act, which is belied by its legislative history and the Commission's own prior interpretations.

¹ *In the Matter of Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, Notice of Proposed Rulemaking in MM Docket 00-39, 15 FCC Rcd 5257 ("NPRM").

Second, claims that change to the DTV standard to permit the use of an alternative modulation scheme can be accomplished in the very near term (i.e., within a year), are baseless and unrealistic. A thorough and realistic analysis of the processes required to accomplish such a change – selection of a definitive standard based on COFDM, testing and analysis of COFDM interference characteristics, and changes to the DTV Table of Allotments – reveals that the addition or substitution of a COFDM-based standard could delay the DTV transition by as much as four or more years and likely push the reclamation of broadcasters’ analog spectrum to 2012. In that time, efforts to perfect 8-VSB DTV receiver performance, chip innovation and all other aspects of the transition would come to a virtual halt; Congress’s 2006 spectrum recovery deadline will pass without reclamation of the spectrum, and the Commission’s objective of achieving a speedy transition to ubiquitous DTV service will be thwarted.

To the extent certain broadcasters’ motivations in changing the DTV standard reflect, as one broadcaster admits, an interest in pursuing “flexible business models” and the view that HDTV is merely a “niche” service,² Thomson believes it is essential to remember that the central focus of the development of and transition to DTV has been to ensure that Americans continue to have free, over-the-air television in the digital era. Thomson has devoted enormous resources and capital investment to that effort, and its DTV products work, giving consumers the significant benefits of digital television. While Thomson is prepared, even eager, to work with broadcasters to facilitate any new business models they may choose to explore, such new initiatives should not and need

² See Comments of Sinclair Broadcasting Group (“Sinclair”) at 22.

not come at the expense of consumers' ability to receive free, over-the-air digital television now.

II. BROADCASTERS' RELIANCE ON THE ALL CHANNEL RECEIVER ACT AS GRANTING THE FCC SUFFICIENT AUTHORITY TO REQUIRE DTV RECEPTION CAPABILITY IN ALL TELEVISION RECEIVERS IS MISPLACED

In its Comments, the National Association of Broadcasters ("NAB") argues that the All Channel Receiver Act ("ACRA")³ authorizes the Commission to promulgate DTV receiver performance standards and also to require that all new television receivers thirteen inches and greater in diagonal screen size be capable of receiving and decoding all NTSC and all DTV transmissions.⁴ NAB states that Congress's reasoning and solution for the UHF reception problem, which was the sole focus of ACRA, should apply with equal force to DTV.⁵

Similarly, the Joint Broadcasters contend that ACRA confers upon the Commission the authority to adopt rules requiring that all DTV receivers meet a specific noise figure; adjacent channel, co-channel, and taboo channel immunity; and multipath interference performance thresholds.⁶ The Joint Broadcasters' argument rests on the premise that such requirements merely would be analogous to the regulations that the Commission imposed to ensure UHF reception.⁷

³ 47 U.S.C. § 303(s).

⁴ Comments of the National Association of Broadcasters ("NAB") at 14-16.

⁵ *Id.* at 16.

⁶ *See* Comments of Joint Broadcasters at 22.

⁷ *Id.* at 24.

Several commenters (including Philips North America Corporation (“Philips”) and the Consumer Electronics Association (“CEA”), in addition to Thomson) directly challenge these assertions, arguing that the ACRA does not authorize the Commission to promulgate DTV receiver standards because the Act was adopted by Congress to address only the *very narrow and specific policy goal of preserving the viability of UHF analog television service*.⁸ These parties agree that neither the text nor the legislative history of the ACRA suggest that Congress either foresaw or intended to accommodate new modes of broadcasting – particularly not digital broadcasting – when it adopted ACRA.

A. Congress Rejected Granting the Commission Broad Authority to Regulate Television Receiver Design When It Enacted ACRA

As originally introduced, the ACRA would have granted the Commission broad authority to set minimum performance standards for all television receivers.⁹ In the course of Congress’ consideration of the bill, however, the legislation was criticized for providing the Commission with too great a role in receiver design, and it was argued that granting such broad authority would allow the FCC to adopt rules requiring, for instance, that all television receivers be color.¹⁰ Reflecting this concern, the House amended the

⁸ See Comments of Thomson at 17; Comments of Philips at 15 (“neither the plain language nor the legislative history of the ACRA support the argument that the Commission has the authority to establish broad receiver performance standards.” Philips further argues that because the technical and policy issues governing the DTV transition are of an entirely separate nature and scope than those that governed the viability of UHF broadcasts, “any attempt to ground Commission authority to promulgate DTV receiver standards on a statute specifically directed at the limited issue of UHF reception is totally misplaced.”). Comments of the Consumer Electronics Association (“CEA”) at 13 (“The text of ACRA and its legislative history...are unambiguously clear that Congress intended this authority to narrowly address the UHF reception problem, and not to more broadly authorize the Commission to adopt minimum performance standards to govern television receivers for other purposes.”).

⁹ S. REP. NO. 87-1526, 2d Sess. (1962), *reprinted in* 1962 U.S.C.C.A.N. Vol. 1, 1873, 1879 (“Senate Report”).

¹⁰ *Id.* at 1879. In hearings before the Senate Commerce Committee, Congressman Kenneth Roberts (D-AL) stated: “The FCC should not have the power to require that all sets be color sets, or have a certain size of picture tube or be made with a certain size speaker and so forth. See *Electronic Indus. Assoc. Consumer*

bill (that eventually became ACRA) for the specific purpose of ensuring that it was limited to ensuring reception of the UHF channels.¹¹

Similarly, to assuage fears of Senators also opposed to the original broad grant of power to the Commission, the Senate Commerce Committee relied heavily on representations it had received from then-Chairman of the FCC, Newton Minow, that the Commission's receiver design regulations would be limited:

The FCC has assured us that the practical need for procuring authority which would permit effective enforcement of this legislation would not involve the Commission broadly in the dealing of television set manufacturers. On the contrary, the Commission's authority, restrictive as it would be of section 303(s), would be most limited and narrow. On the basis of these representations, your committee agrees that the authority given to the Commission to require that all channel receivers "be capable of adequately receiving" UHF channels is narrow in scope and in the main consistent with what the House did in reporting its legislation.¹²

Congress thus affirmatively and knowingly rejected language that would have granted the Commission broad authority to set "minimum performance standards," and instead enacted legislation authorizing the Commission to "require that apparatus designed to receive television pictures broadcast simultaneously with sound be capable of adequately receiving all frequencies," with the understanding that this authority is limited, as stated in the Senate Report, to "certain regulatory authority to require that all

Elec. Group v. FCC, 636 F.2d 689, 694 (1980) (citing *All-Channel Television Receivers: Hearing on S.2109 before the Subcomm. on Communications of the Senate Comm. On Commerce*, 87th Cong., 2d Sess. 59 (1962)). Similarly, during hearings on the bill before the House Committee on Interstate and Foreign Commerce, industry officials criticized the proposed language because it "provides too broad an authority to prescribe 'minimum performance capabilities.'" See *Electronic Indus. Assoc.* at 694 (citing *All Channel Television Receivers and Deintermixture: Hearings on H.R. 8031 Before the House Comm. On Interstate and Foreign Commerce*, 87th Cong., 2d Sess. 274 (1962) (testimony of W. Walter Watts, RCA Corp.).

¹¹ See H.R. REP. NO. 87-1559, at 1 (1962) ("House Report").

¹² Senate Report at 1880 (emphasis added).

television receivers . . . be equipped at the time of manufacture to receive all television channels. *That is, the 70 UHF and 12 VHF channels.*”¹³

B. The Commission Correctly Has Declined to Adopt Unauthorized Receiver Standards or to Require Dual-Mode Reception Capability In Receivers

In direct rebuttal to the newest wrinkle in broadcasters’ seemingly ceaseless calls for government intervention into consumer electronics design: a mandate that all receivers 13” or larger include “dual-mode” capability (*i.e.*, receivers capable of tuning both NTSC and DTV signals) – CEA and Thomson (and Philips, by reference), point out that the Commission itself has determined, correctly, that the ACRA does not apply to digital television.¹⁴ As discussed *infra*, the Commission’s judgment in this regard was both legally sound and wise.

1. The FCC Has Declined to Mandate the Manufacture of Dual-Mode Television Receivers; Any Reversal Would Require Specific Justification by the Commission.

To date, the Commission has twice declined to mandate the manufacture of so-called “dual mode” television receivers, which are capable of receiving and decoding both NTSC and ATSC signals, citing the lack of any such mandate under the ACRA. Specifically, in its *Fifth Report & Order*, the Commission noted that it has “previously determined in this proceeding that the All Channel Receiver Act does not mandate the manufacture of dual-mode (DTV and NTSC) receivers.”¹⁵ Moreover, the Commission decided that “at this time, equipment manufacturers should have maximum latitude to

¹³ Senate Report at 1873 (emphasis added).

¹⁴ Comments of CEA at 14; Comments of Thomson at 17; Comments of Philips at 15 (referencing and supporting CEA Comments).

¹⁵ Fifth Report and Order, 12 FCC Rcd 12809, 12855-6 (1997) (citing Third Report and Order, Third Further Notice of Proposed Rule Making, 7 FCC Rcd 6924, 6984 (1992)).

determine which video formats DTV equipment will receive...” and market forces provide the best incentive to create receiver and converter designs most in demand by consumers.¹⁶

An administrative agency may not arbitrarily change prior policies. As articulated by the U.S. Supreme Court, “an agency changing its course ... is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance.” *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co., et. al.*, 463 U.S. 29, 42 (1983). This standard has been discussed in the context of FCC action by the United States Court of Appeals for the District of Columbia Circuit: “An agency’s view of what is in the public interest may change, either with or without a change in circumstances. But an agency changing its course must supply a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored...” *Greater Boston TV Corp. v. FCC*, 444 F. 2d. 841, 852 (D.C. Cir. 1970); *see also, American Telephone & Telegraph Company v. FCC*, 974 F. 2d. 1351 (D.C. Cir. 1992) (FCC acted arbitrarily when it failed to acknowledge a change in policy.)

In this circumstance, where the FCC has twice in the past eight years carefully considered and twice rejected pleas to impose receiver standards on digital television receiver manufacturers, there is no sustainable basis upon which the Commission could reverse course. The record before the Commission reveals that receivers are working and are improving rapidly to address specific problems such as indoor reception in extreme

¹⁶ Fifth Report and Order, 12 FCC Rcd 12809, 12855-6 (1997).

multipath interference environments. The imposition of receiver performance standards would be inordinately time consuming and technically counter-productive.

2. NAB's Proposed "Dual-Mode" Mandate Would Have Enormous and Harmful Cost Implications for Consumers and Could Not Be Imposed Absent Specific Action by Congress.

Perhaps most troubling about NAB's proposed dual-mode mandate is its apparent lack of concern for the cost implications of such a requirement. Were manufacturers to be required to include digital tuning capability in every one of its television products with screen sizes 13 inches or larger, as NAB suggests, especially before sufficient time has passed to drive down DTV costs, retail prices for all analog television receivers would increase dramatically.

The NAB proposal is an attack on millions of television-buying consumers. In effect, NAB is suggesting that the Commission force consumers, instantly, to make the transition to DTV, regardless of the cost, regardless of their needs, and regardless of their interest. On its face, such a regressive proposal stands in opposition to the most fundamental reason why Congress and the Commission agreed to a DTV *transition* at all, which was to give consumers sufficient time to purchase, at steadily declining prices, the necessary equipment to receive DTV services so as not to impose unnecessary costs.¹⁷ Indeed, it is hard to think of an action that would sour consumers to DTV more than what NAB is suggesting.

Moreover, given both the cost implications and its extraordinarily invasive nature – both to consumer electronics manufacturers and consumers – such a mandate could not

¹⁷ If one were to take the NAB proposal to its logical extreme, the Commission should impose a similar mandate that all broadcasters instantaneously be required to produce and transmit 100 percent of their programming in digital form to ensure the full value of the receivers consumers are purchasing.

be legally sustained without specific statutory authority granted by Congress. Absent such authority, the Commission should reject NAB's dual-mode proposal for what it is: ill-conceived, harshly anti-consumer and directly contrary to the Commission's goals of fostering a swift and smooth transition to DTV.

III. CLAIMS THAT IMPLEMENTATION OF AN ALTERNATIVE DTV STANDARD WILL TAKE "LITTLE MORE THAN A YEAR" ARE UTTERLY VAPOROUS; A REALISTIC, FACTUAL ANALYSIS REVEALS THAT SUCH A CHANGE COULD DELAY THE TRANSITION BY AT LEAST FOUR YEARS OR MORE

There is no question that the greatest threat to the success of the DTV transition, and the public policy goals attached thereto, is delay. Indeed, Congress's and the Commission's shared goals of preserving free, universally available local broadcast television, advancing spectrum efficiency and rapidly recovering broadcasters' analog spectrum for reauction all are threatened if the transition fails to move forward at a swift pace. Indeed, most entities participating in this proceeding, including Thomson, recognize this threat and warn, for a variety of reasons, against the ill effects of delay on the DTV transition.

Given this concern, it is not altogether surprising that the principal proponent of changing the DTV standard, Sinclair Broadcast Group ("Sinclair"), would attempt to minimize the delay that would inevitably occur were such a change to be implemented. But, in fact, Sinclair goes much farther than that, asking the Commission to accept on nothing but pure faith that altering the Commission's mandated standard to allow the use of some form of COFDM-based DVB-T standard can be implemented in "a little more

than a year.”¹⁸ To back up this incredible claim, Sinclair offers only the naked assertion that DVB-T “is a proven technology that has been implemented and commercialized outside the United States,” and that “[a] Commission proceeding to settle any outstanding DVB-T coding and modulation issues and to develop appropriate interference criteria could likely be conducted in little more than *six months*”(emphasis added).¹⁹ As the old saying goes, “if it seems too good to be true, it probably is.” Thomson urges the Commission – and others – not to be swayed by Sinclair’s siren song, and offers a more comprehensive analysis *infra* to aid the Commission’s *informed* consideration of this matter.²⁰

In fact, as the Commission already determined when it dismissed the Sinclair Petition, any change to the DTV standard would likely require a “multi-year” effort that would cause a “significant delay in the implementation and provision of DTV services to the public.”²¹

As discussed below, and as illustrated in Appendix A, using the Advisory Committee on Advanced Television Services (“ACATS” or “Advisory Committee”)

¹⁸ Comments of Sinclair at 35.

¹⁹ *Id.*

²⁰ Sinclair also asserts – again without any supporting evidence or even discussion – that the associated costs to broadcasters seeking to modify their transmitters for DVB-T programming would be “little more than \$7,000.” Comments of Sinclair at 35. (Univision Communications (“Univision”) also makes the wholly unsubstantiated claim that the costs to broadcasters of converting to COFDM “will be minimal.” Comments of Univision at 24.) These claims are not only grossly inaccurate on its face, but completely ignore other longer-term costs to broadcasters (at least those not seeking to cut off service to large portions of viewers), mostly due to COFDM’s demand for increased power for equivalent coverage. The nation’s largest manufacturer of DTV transmitter and encoder equipment, Harris Corporation, has provided the Commission with detailed information revealing that, in fact, broadcasters would face one-time capital costs ranging from \$600,000 to nearly \$1 million, and increased annual operating costs of \$65,000 to \$227,000. *See* Harris Position Paper, The DTV Transition: Stay the Course on ATSC,” (August 10, 1999).

²¹ Comments of Sinclair at 35, citing the Commission’s Letter to Martin Leader, Counsel to Sinclair, Dismissing Sinclair’s Petition for Expedited Rulemaking, FCC 00-35 (Feb. 2, 2000).

process as a model, the effort to develop (with the necessary industry consensus), test and adopt a COFDM-based standard, and make necessary conforming changes to the DTV Table of Allotments, would – even optimistically – consume the better part of four years, if not more. During that time, all other DTV-related work – DTV receiver improvements, chip innovations, DTV cost reductions, progress toward 85 percent DTV equipment penetration, investment in programming, entrepreneurial innovations – will be paralyzed.

A. Development of an Industry Proposal for a Specific COFDM-Based Standard (2 Years)

The ACATS process serves as a useful and accurate guide, both procedurally and in terms of timing, for analyzing realistically the forces that would be unleashed and the delay that would befall the transition should the addition or substitution of a COFDM-based standard be pursued to its conclusion.

As a threshold matter, before the Commission could move forward, it would be incumbent upon broadcasters (with the input of other DTV stakeholders, including consumer electronics manufacturers, cable operators, computer and DTV data companies and consumer groups), to develop an industry consensus around a specific COFDM-based standard. Such consensus-building necessarily would entail rigorous and *scientific* testing of any number of proposed COFDM implementations – the European DVB-T system, the Japanese ISDB standard, perhaps others²² – in order to determine which

²² It is important to note, and the Commission is well aware, that while Sinclair may prefer, as it appears to, the DVB-T standard, other broadcasters may prefer the ISDB standard, which outperformed DVB-T in certain tests. See *ABERT/SET Study Group Report on Digital Television* (submitted to ANATEL, the Brazilian Telecommunications Agency), (May 15, 2000) <<<http://www.set.com.br/isetfram.htm>>> In either case, the fact that a particular alternative DTV standard has been commercially developed for use elsewhere is no guarantee that it is the right choice for the U.S., as Sinclair suggests, particularly given the

COFDM standard, or perhaps more precisely, which *elements* of each COFDM standard, are preferred and best suit broadcasters' needs. As in the ACATS process, this testing would necessarily focus on each standard's unique interference characteristics,²³ power requirements, signal-to-noise thresholds, and a host of other parameters. This data, once collected and analyzed, would then form the basis upon which broadcasters and all interested parties, on a consensus basis, would make their formal recommendation to the Commission of a specific COFDM-based standard.

As the Commission is well aware, the testing, peer-review and inter-industry analysis and debate conducted under the auspices of the ACATS process spanned nearly ten years. More than two years elapsed from the announcement of the Grand Alliance standard until ACATS' recommendation of the 8-VSB standard to the Commission. While many of the tasks entailed in the development of the ATSC standard apply with equal, if not greater, force to the development of a compatible and technically sound COFDM standard for the U.S., Thomson does not suggest that such an effort would require ten years. Thomson does believe, however, that such a COFDM-focused effort could not be completed in less than two years, or the latter part of 2002.

fact that the proposed additional standard would overlay not only one but two – ATSC and NTSC – other terrestrial broadcast systems during the transition.

²³ The lack of a specific COFDM standard, designed for the 6 MHz channels used in the United States, has precluded meaningful analysis of COFDM's interference characteristics and the definition of allowable COFDM transmission power levels. The Commission's own technical experts have confirmed the need for "further study and testing" regarding COFDM's interference characteristics on a number of parameters, especially COFDM interference into existing NTSC stations, given COFDM's 4 dB disadvantage over 8-VSB for equivalent coverage. See *FCC, Office of Engineering and Technology, DTV Report on COFDM and 8-VSB Performance*, (September 30, 1999) ("OET Report") at 24. Additionally, given Sinclair's request that the Commission, for the first time in U.S. broadcast history, adopt a multiple standards approach, it also would be necessary to investigate COFDM interference into ATSC channels.

Moreover, as the OET Report also points out, given COFDM's inherent difficulty overcoming impulse noise, it will be necessary also to examine the extent to which COFDM could support satisfactory service on VHF and lower UHF channels. *Id.*

Moreover, as Thomson and others have consistently warned, it would be difficult, if not impossible, to reopen the debate on the ATSC DTV standard's modulation scheme without also reopening the debate on any number of other elements (MPEG-2 and Dolby audio, for instance).²⁴ In that context, it certainly is foreseeable that the Commission would be asked to adopt QAM as a uniform modulation standard for both broadcasting and cable, which would mitigate some of the challenges posed by DTV/cable compatibility. Entities so inclined could very well exploit the instability created by such a debate to achieve now what they could not during the decade-long ACATS process, only compounding the delay and uncertainty that would be visited upon the transition.

B. FCC Rulemaking to Adopt the COFDM Standard (1 year)

Upon the formal recommendation by broadcasters and other interested parties of a specific COFDM-based standard, the Commission would be required to initiate a rulemaking to amend its current DTV standard to permit the use of the recommended COFDM standard. Again, the process that led to the adoption of the ATSC DTV Standard is instructive.

The Advisory Committee formally recommended that the Commission adopt the ATSC DTV Standard in November 1995. Six months later, in May 1996, the Commission adopted its *Fifth Further Notice*,²⁵ which proposed that the ATSC DTV Standard be adopted. Finally, 13 months after the initial ACATS recommendation, the

²⁴ See Comments of Philips at 14 ("...any reconsideration of the DTV standard's modulation scheme would inevitably trigger reconsideration of the standard's other features.")

²⁵ See *Fifth Further Notice of Proposed Rulemaking* in MM Docket 87-268, 11 FCC Rcd 6235 (1996) ("Fifth Further Notice").

Commission adopted its *Fourth Report and Order*, which adopted a slightly revised version of the proposed standard.

Even on an expedited basis (for instance, eliminating the 6-month delay that occurred between the formal recommendation and the proposed adoption of the ATSC standard), a Commission rulemaking to adopt the COFDM standard would span a minimum of seven months. Realistically, however, considering likely petitions for reconsideration, it is more likely the proceeding would not be completed much before the end of 2003.

C. Amendments to the DTV Table of Allotments (1 year)

As Thomson and others have consistently stated, the addition of COFDM as a permissible modulation for DTV broadcasters could require wholesale and extremely time consuming revisions of the DTV Table of Allotments.²⁶ As Zenith notes, “COFDM’s power requirements for equal coverage and associated interference problems would most certainly require that the DTV Table of Allotments be re-analyzed and revised, a formidable task considering the long and arduous process that the Commission

²⁶ See Comments of Philips at 13-14; Comments of NxtWave at 5 (“The specific technical attributes of the DTV standard determined the details of the Commission’s technical analysis and channel assignments set out in its DTV Table of Allotments. A modulation scheme with different carrier-to-noise power requirements would require a new Table based upon the new characteristics of the new modulation scheme.” See also, Opposition to Petition for Expedited Rulemaking and Motion for its Immediate Dismissal, filed by the Consumer Electronics Association (October 14, 1999) (“CEA Opposition”) at 22 (“It is ... extremely unlikely that the DTV Table of Allotments could accommodate the introduction of COFDM.... This is a certainty if COFDM broadcasters would approach replication of existing analog service areas by either (1) increasing power; or (2) constructing, connecting and operating a single-frequency network consisting of multiple transmitter sites”).

went through to finalize the current DTV Table.”²⁷ Moreover, if history is any guide, final resolution and consensus on such revisions could take years. As CEA discussed in its *Opposition*:

...it is logical to assume that broadcasters across the country who have not challenged the [current] Table of Allotments will believe that they are entitled to nothing less than their current allotment, should the Table be re-crafted.”²⁸

The Commission, as Zenith and CEA have noted, also is on record supporting this view, having determined, in its *Fourth Report and Order*, that “more than one transmission standard would make it more difficult to facilitate an efficient allotment of broadcast channels and protect against interference.”²⁹

Just as in the ACATS process, necessary revisions to the Table of Allotments could begin before the Commission formally adopts a specific COFDM standard. However, *completion* of the revised Table likely would extend beyond that date, as was the case with the current Table, which took, on the whole, six years to complete, but which did not conclude until more than one year after the Commission’s adoption of the DTV standard.³⁰ (Notably, the current DTV Table of Allotments is the subject of an

²⁷ Comments of Zenith at 12.

²⁸ CEA *Opposition* at 22.

²⁹ See *In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fourth Report and Order in MM Docket No. 87-268, 11 FCC Rcd 17771 (1996) (“Fourth Report and Order”) at ¶ 36.

³⁰ The Commission first addressed proposals relating to the development of channel allotments for DTV service when it adopted, on July 16, 1992, its *Second Further Notice of Proposed Rulemaking* (See *Second Further Notice of Proposed Rulemaking* in MM Docket No. 87-268, 7 FCC Rcd 5376 (1992)). On April 3, 1997, the Commission adopted the *Sixth Report and Order*, adopting a DTV Table of Allotments (see *Sixth Report and Order*, MM Docket No. 87-268, 12 FCC Rcd 14588 (1997)), and addressed various Petitions for Reconsideration of that Order when it adopted its *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* on February 17, 1998 (see *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket No. 87-268, 13 FCC Rcd 7418) – nearly six years after the Commission’s adoption of its original NPRM.

appeal in the D.C. Circuit Court of Appeals).³¹ Using the ATSC experience as a guide, it would be prudent to expect that revisions to the Table might not be complete until early in 2005.

Using this timetable, and given manufacturers' 18 to 24 month product development cycle, Thomson estimates that it might be able to introduce DTV receivers designed to a new, COFDM-based standard sometime in late 2006 or early 2007.

Finally, using the pace of the transition to date as a guide, once new COFDM-compatible DTV receivers are available (and assuming, as one must, that every consumer who had already purchased a DTV built to the present standard would be forced to replace that receiver in order to receive both ATSC and COFDM broadcasts); it is reasonable to project that Congress's 85 percent DTV penetration threshold would not be attainable before 2012 – seven years after the adoption of the new standard.

Clearly, any decision to change the DTV standard would unleash a set of forces that would, under the most optimistic of estimates, delay the DTV transition by at least four years. During that time, DTV manufacturers will have zero incentive to continue their substantial efforts and investments in ATSC innovations, nor would consumers have sufficient confidence – or product – to make purchases necessary to drive DTV penetration rates at the rate necessary to achieve Congress's goal of a 2006 reclamation of broadcasters' analog spectrum.

³¹ *Lindsay Television v. Federal Communications Commission*, No. 98-1105 (D.C. Cir. Joint Brief of Petitioners filed Oct. 7, 1999).

At this critical stage in the transition, to proceed any further along a path toward revising the DTV standard without fully understanding the ramifications of that decision on the timing of the transition would be folly.

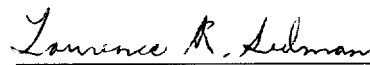
IV. CONCLUSION.

As Thomson stated in its initial Comments, the transition to DTV is off to a very good start but stands at a critical juncture. While concerns surrounding specific DTV implementation issues must be resolved, it is critical that solutions to these eminently solvable problems not be allowed to either delay or inject harmful uncertainty into the transition. Thomson urges the Commission to adopt the recommendations put forth in its Comments in this proceeding to allow all parties to drive the DTV transition to a swift and successful conclusion.

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APPENDIX A

**A CHANGE IN THE DTV STANDARD TO ADD OR SUBSTITUTE COFDM
WOULD RESULT IN A DELAY OF FOUR OR MORE YEARS**

